

1 **ABSTRACT :**

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3 A ball-covering needlefelt produced by needling a fibre
4 batt in a range of angles including a plurality of
5 angles which are non-perpendicular to the plane of the
6 batt. The range of angles is preferably achieved by
7 the batt being curved during needling, the batt
8 conveniently being curved in its direction of travel
9 through the needling machine. The needleboard of the
10 needling machine is preferably correspondingly curved.

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12 The needling process produces a needlefelt having a
13 high degree of fibre entanglement (comparable to woven
14 ball-covering felts) and enables achievement of
15 characteristics necessary for good wear and abrasion
16 resistance without the excessive consolidation in
17 conventional ball-covering needlefelts that leads to
18 loss of flexibility (tending to faulty ball covering)
19 and poor dynamic characteristics (making such balls
20 unsuitable for professional use).

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22 The invention is particularly applicable to the
23 manufacture of championship-quality tennis balls.

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